

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A capacitance detection device that reads asperity information for a subject surface by outputting a detection signal corresponding to the capacitance formed between the subject surface and the capacitance detection device, comprising:

a detection unit in which is arranged a plurality of capacitance detection circuits that output the detection signal; and

an amplification circuit that amplifies the detection signal,
wherein the capacitance detection circuit comprises

a reference capacitance having a fixed capacitance value,

a sensor electrode for forming a capacitance between the subject surface and the sensor electrode,

a signal output element that outputs a detection signal corresponding to the capacitance, a capacitance ratio of the reference capacitance to the capacitance formed between the subject surface and the sensor electrode, and

a low potential source line that connects to the signal transmission path of the detection signal; and

a scan line for selecting the capacitance detection circuit,
wherein the scan line charges the reference capacitance,
wherein the amplification circuit functions as a signal source for outputting the detection signal to the capacitance detection circuit and is constituted such that the detection signal is transmitted from the amplification circuit to the low potential source line via the signal output element.

2. (Original) The capacitance detection device according to claim 1, wherein:
the detection signal is a current signal; and
the amplification circuit functions as a current source that supplies the current signal to the capacitance detection circuit.

3. (Original) The capacitance detection device according to claim 1, wherein the amplification circuit is formed outside the formation region of the detection unit.

4. (Currently Amended) The capacitance detection device according to claim 1, further comprising:

a plurality of select lines for selecting the capacitance detection circuit; and
a plurality of data lines for outputting the detection signal from the amplification circuit to the capacitance detection circuit,

wherein the capacitance detection circuit further comprises a select transistor that connects to the respective select-scan line and is constituted such that the passage and shutoff of electricity between the respective data line and signal output element is controlled by means of open/close control of the select transistor.

5. (Original) The capacitance detection device according to claim 4, further comprising:

pre-charging means that pre-charge the data line as a stage prior to outputting the detection signal on the data line.

6. (Original) The capacitance detection device according to claim 5, further comprising:

pre-charge period setting means for setting the ratio between the pre-charge period, in which the pre-charging means execute data-line pre-charging, and the sensing period, in which the signal output element outputs the detection signal.

7. (Original) The capacitance detection device according to claim 1, wherein:

the signal output element is constituted as a three-terminal transistor having a current control terminal, a current input terminal, and a current output terminal, and further comprises potential control means for controlling the potential of the current control terminal to a predetermined potential as a stage prior to outputting the detection signal corresponding to the capacitance.

8. (Cancelled)

9. (Original) The capacitance detection device according to claim 1, wherein the capacitance detection circuit is formed on an insulating substrate.

10. (Original) A fingerprint sensor that comprises the capacitance detection device according to claim 1 and is constituted to read fingerprint asperity information.

11. (Original) A biometrics authentication device that comprises the fingerprint sensor according to claim 10.

12. (Currently Amended) A drive method for a capacitance detection device that comprises a reference capacitance having a fixed capacitance value, a current amplification element that increases or reduces the gain of a current signal in response to ~~the capacitance formed between the capacitance detection device and a subject surface; a capacitance ratio of the reference capacitance to a capacitance formed between a subject surface and the capacitance detection device~~; a data line for supplying the current signal to the current amplification element; an amplification circuit that amplifies the current signal flowing through the data line; a select transistor that controls the passage and shutoff of electricity between the data line and the current amplification element; a scan line for selecting the select transistor; and a low potential source line that connects to the output path of the current signal, the drive method comprising the steps of:

electrically shutting off the data line and the current amplification element from each other by closing the select transistor;

pre-charging the data line to a predetermined potential;
allowing electrical conduction between the data line and the current
amplification element by opening the select transistor after the data-line pre-charging is
complete;

charging the reference capacitance via the scan line; and
performing sensing by supplying a current signal from the amplification circuit
to the current amplification element via the data line and amplifying the current signal by
means of current gain that corresponds to the capacitance.

13. (Original) The drive method for the capacitance detection device according to
claim 12, wherein the ratio between the period for executing the pre-charging step and the
period for executing the sensing step is variable.